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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/585,074 | 01/04/2007 | Patrick Audebert | 293105US2PCT | 7708 |

22850 7590 12/24/2008
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

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| EXAMINER |
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MALEVIC, DJURA

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| ART UNIT | PAPER NUMBER |
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2884

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| NOTIFICATION DATE | DELIVERY MODE |
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12/24/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

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|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/585,074 | Applicant(s) AUDEBERT ET AL. | |
| | Examiner DJURA MALEVIC | Art Unit 2884 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06/29/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>09/29/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23 – 25, 27 – 30, 32, 35, and 38 – 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Adachi (JP 07-239385 A).

With regards to claim 23, Adachi discloses a device for measuring exposure to radiation (Figure 1) comprising: at least one component for detecting photons or particles 1, associated with at least one circuit 2 for acquiring and counting detection events, the acquisition circuit 2 including a signal processing circuit 2a delivering count pulses corresponding to detection events, means for continuous resetting 2, and means for discontinuously resetting 10 the pulse signal processing circuit.

With regards to claim 24, Adachi discloses a response curve of a number of counted events versus a number of photons or particles sensed, by each detection component, is a monotonous increasing curve (See figure 2).

With regards to claim 25, Adachi discloses the response curve has a first response range that increases substantially linearly, the number of counted events increasing proportionally to the number of sensed photons or particles, followed by a second response range that is simply increasing, the number of counted events

Art Unit: 2884

continuing to increase or remaining stable as long as the number of sensed photons or particles increases (See figure 2).

With regards to claim 27, Adachi discloses said continuous resetting means triggers (See switch 11 and 12) a resetting current in a charge accumulation stage of the acquisition circuit.

With regards to claim 28, Adachi discloses element 10, resets as appropriate (when no signal is detected) and by doing so, said element 10 idles when no signal is detected.

With regards to claim 29, Adachi discloses said continuous resetting means triggers capacitive means 2b of a charge accumulation stage in response to each detected event (See figure).

With regards to claim 30, Adachi further discloses comprising means for shortening (Switch 12) discharge of the capacitive means.

With regards to claim 32, Adachi further discloses comprising means for switching (Switch 12) a discharge current value in a charge accumulation amplifier stage.

With regards to claim 35, Adachi further shows comprising switching means (Switch 12) for short-circuiting capacitive means of a charge conversion stage.

With regards to claim 38, Adachi further shows the acquisition and counting circuit comprises a feedback or counter-reaction loop between a point downstream from a charge accumulation stage and said stage (See letter A and C).

With regards to claim 39, Adachi further shows the continuous resetting means are applied to said accumulation stage (See letter A).

With regards to claim 40, Adachi further shows the feedback loop retransmits signals of count pulses (See output of 2a).

With regards to claim 41, Adachi further shows the feedback loop transmits a signal from a threshold comparator stage 4.

With regards to claim 42, Adachi further shows the feedback loop controls switching means connected to terminals of the charge accumulation stage (See operation of controls means 10).

With regards to claim 43, Adachi further shows the feedback loop controls a discharge current source (See B).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi.

With regards to claim 26, Adachi discloses the claimed invention according to claim 23, absent some degree of criticality, the recitation of a matrix of detectors is considered a matter of design choice involving routine skill in the art. Matrix detectors are well known and conventionally use in the art. Such matrix detectors can be arranged in a predetermined pattern such as a grid in order to image in two dimensions

Art Unit: 2884

and observe larger areas. Accordingly, it would have been obvious to ordinary skill in the art at the time the invention was made to modify Adachi to comprise a matrix layout in order to observe larger areas.

Claims 31, 33, 36, 37 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi in view of Tsuruta et al. (US Patent 5,233,180).

With regards to claims 31, 33, 36, 37 and 44, Adachi discloses the claimed inventions according to claim 23, but fails to expressly disclose continuous discharging current sources, discharging current vales for idle and current values for detecting. Notice, the specifically claimed features are well known control circuit techniques. Tsuruta shows the well known techniques and elements as claimed (See Figure 1.1, specifically element 116) (Col. 6, lines 6 – 33). Accordingly, it would have been obvious to ordinary skill in the art at the time the invention was made to modify Adachi to include the well known elements and techniques in order to assure linearity which maintains high sensitivity.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DJURA MALEVIC whose telephone number is 571.272.5975. The examiner can normally be reached on Monday - Friday between 8:30am and 4:00pm.

Art Unit: 2884

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Porta can be reached on 571.272.2444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Djura Malevic/

Examiner, Art Unit 2884

571.272.5975

/David P. Porta/

Supervisory Patent Examiner, Art Unit 2884